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NEWS 3 JUL 28 EPPFULL enhanced with additional legal status information from the epoline Register
NEWS 4 JUL 28 IFICDB, IFIPAT, and IFIUDB reloaded with enhancements
NEWS 5 JUL 28 STN Viewer performance improved
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NEWS 7 AUG 13 CA/Caplus enhanced with printed Chemical Abstracts page images from 1967-1998
NEWS 8 AUG 15 CAOLD to be discontinued on December 31, 2008
NEWS 9 AUG 15 Caplus currency for Korean patents enhanced
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NEWS 11 SEP 18 Support for STN Express, Versions 6.01 and earlier, to be discontinued
NEWS 12 SEP 25 CA/Caplus current-awareness alert options enhanced to accommodate supplemental CAS indexing of exemplified prophetic substances
NEWS 13 SEP 26 WPIDS, WPINDEX, and WPIX coverage of Chinese and and Korean patents enhanced
NEWS 14 SEP 29 IFICLS enhanced with new super search field
NEWS 15 SEP 29 EMBASE and EMBAL enhanced with new search and display fields
NEWS 16 SEP 30 CAS patent coverage enhanced to include exemplified prophetic substances identified in new Japanese-language patents
NEWS 17 OCT 07 EPPFULL enhanced with full implementation of EPC2000
NEWS 18 OCT 07 Multiple databases enhanced for more flexible patent number searching
NEWS 19 OCT 22 Current-awareness alert (SDI) setup and editing enhanced
NEWS 20 OCT 22 WPIDS, WPINDEX, and WPIX enhanced with Canadian PCT Applications
NEWS 21 OCT 24 CHEMLIST enhanced with intermediate list of pre-registered REACH substances

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
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*IPA = International Pharmaceutical Abstracts 1970-present

* The files listed above are temporarily unavailable.

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AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
CEABA-VTB, CIM, CONFSCI, CROB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
DRUGMONOG2, DRUGH, EMRAL, ERMAZE, ...' ENTERED AT 00:51:52 ON 04 NOV 2008

71 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view search error messages that display as 0* with SET DETAIL OFF.

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> s rna?(3w) dependen?(3w) rna?(3w) polymeras?
    16 FILE ADISINSIGHT
     1 FILE ADISNEWS
    426 FILE AGRICOLA
     4 FILE AQUALINE
    43 FILE AQUASCI
   213 FILE BICENG
  2118 FILE BIOSIS
   185 FILE BIOTECHABS
   185 FILE BIOTECHDS
   833 FILE BIOTECHNO
   874 FILE CABA
  3911 FILE CAPLUS
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    6 FILE CEABA-VTB
     3 FILE CIN
    37 FILE CONFSCI
     1 FILE CROPB
     2 FILE CROPU
     8 FILE DDFB
    86 FILE DDFU
  1775 FILE DGENE
  186 FILE DISSABS
     8 FILE DRUGB
   111 FILE DRUGU
    22 FILE EMBAL
  1556 FILE EMBASE
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1289 FILE ESBIOBASE
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10 FILE IMSPRESEARCH
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322 FILE PROUSDDR
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2 FILE VETU
4 FILE WATER
267 FILE WPIDS
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267 FILE WPINDEX
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L1 QUE RNA?(3W) DEPENDEN?(3W) RNA?(3W) POLIMERAS?

-> d rank
F1 7694 GENBANK
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F5 1827 MEDLINE
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F7 1748 SCISEARCH
F8 1556 EMBASE
F9 1489 LIFESCI
F10 1289 ESBIOBASE
F11 874 CABAB
F12 833 BIOTECHNO
F13 764 TOXCENTER
F14 620 PASCAL
F15 515 USGENE
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F20 267 WPIDS
F21 267 WPINDEX
F22 213 BIOENG

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| F36 | 11 | IMS DRUGNEWS |
| F37 | 10 | IMS RESEARCH |
| F38 | 8 | DDFB |
| F39 | 8 | DRUGB |
| F40 | 7 | NTIS |
| F41 | 7 | USPATOLD |
| F42 | 6 | CEABA-VTB |
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| F56 | 1 | VETB |
| F57 | 1 | NAPRALERT |

-> file f2-f5, f7-f18

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=> s rna?(3w)dependen?(3w)rna?(3w)polymeras?

L2 21057 RNA?(3W) DEPENDEN?(3W) RNA?(3W) POLYMERAS?

=> s 12(s)(gene?(3w)silenc?)

1 FILES SEARCHED...

8 FILES SEARCHED...

12 FILES SEARCHED...

13 FILES SEARCHED...

L3 508 L2(S)(GENE?(3W) SILEN?)

=> s 13(s)crassa?

L4 77 L3(S) CRASSA?

=> dup rem 14

DUPLICATE IS NOT AVAILABLE IN 'USGENE'.

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L5 34 DUP REM L4 (43 DUPLICATES REMOVED)

=> d ti 15 1-34

L5 ANSWER 1 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 1

TI The RNA-dependent RNA polymerase
essential for post-transcriptional gene silencing in
Neurospora crassa interacts with replication protein A

L5 ANSWER 2 OF 34 USPATFULL on STN

TI RNA interference

L5 ANSWER 3 OF 34 USPATFULL on STN

DUPLICATE 2

- TI Composition for treatment of prevention of endometrial cancer and method of preventing or treating endometrial cancer using the composition
- L5 ANSWER 4 OF 34 USPATFULL on STN
TI Soluble rna polymerase protein and methods for the use thereof
- L5 ANSWER 5 OF 34 USPATFULL on STN
TI Methods and compositions for generating recombinant nucleic acid molecules
- L5 ANSWER 6 OF 34 IFIPAT COPYRIGHT 2008 IFI on STN
TI Isolation and characterization of a *N. crassa* silencing gene and uses thereof; *Neurospora crassa* (*N. crassa*); nucleotide sequences; vectors and host cells; silencing gene has a RNA-dependent RNA polymerase domain; use to study gene silencing as it pertains to expression of transgenes
- L5 ANSWER 7 OF 34 Elsevier BIOBASE COPYRIGHT 2008 Elsevier Science B.V. on STN
TI The structure of an RNAi polymerase links RNA silencing and transcription
- L5 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN
TI Obtaining a stable gene silencing in eukaryotic cells by overexpression of RNA dependent RNA polymerase encoded by the qde-1 gene
- L5 ANSWER 9 OF 34 USPATFULL on STN
TI Methods and means for gene silencing in plants
- L5 ANSWER 10 OF 34 USPATFULL on STN
TI Compositions and methods for preparing short RNA molecules and other nucleic acids
- L5 ANSWER 11 OF 34 USPATFULL on STN
TI Methods and compositions for controlling efficacy of RNA silencing
- L5 ANSWER 12 OF 34 USPATFULL on STN
TI In vivo gene silencing by chemically modified and stable siRNA
- L5 ANSWER 13 OF 34 Elsevier BIOBASE COPYRIGHT 2008 Elsevier Science B.V. on STN
TI The post-transcriptional gene silencing machinery functions independently of DNA methylation to repress a LINE1-like retrotransposon in *Neurospora crassa*
- L5 ANSWER 14 OF 34 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 3
TI RNA Silencing in *Aspergillus nidulans* Is Independent of RNA-Dependent RNA Polymerases
- L5 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 4
TI Gene silencing pathway RNA-dependent RNA polymerase of *Neurospora crassa*; yeast expression and crystallization of selenomethionated QDE-1 protein
- L5 ANSWER 16 OF 34 LIFESCI COPYRIGHT 2008 CSA on STN
TI RNA Silencing in *Aspergillus nidulans* Is Independent of RNA-Dependent RNA Polymerases
- L5 ANSWER 17 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN
TI Methods for post-transcriptional gene silencing using soluble *Neurospora crassa* RNA polymerase

- L5 ANSWER 18 OF 34 USPATFULL on STN
TI RNA interference
- L5 ANSWER 19 OF 34 USPATFULL on STN
TI Regulation of transcription elongation factors
- L5 ANSWER 20 OF 34 USPATFULL on STN
TI Continuous non-radioactive polymerase assay
- L5 ANSWER 21 OF 34 USPATFULL on STN
TI Methods and compositions for RNA interference
- L5 ANSWER 22 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 5
TI Redundancy of the two dicer genes in transgene-induced posttranscriptional gene silencing in *Neurospora crassa*
- L5 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 6
TI The RNA-dependent RNA polymerase,
QDE-1, is a rate-limiting factor in post-transcriptional gene silencing in *Neurospora crassa*
- L5 ANSWER 24 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN
TI RNA-dependent RNA polymerase in gene silencing
- L5 ANSWER 25 OF 34 Elsevier BIOBASE COPYRIGHT 2008 Elsevier Science B.V.
on STN
TI Detection of unpaired DNA at meiosis results in RNA-mediated silencing
- L5 ANSWER 26 OF 34 USPATFULL on STN
TI Methods and compositions for RNA interference
- L5 ANSWER 27 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 7
TI Cellular RNA-dependent RNA polymerase involved in posttranscriptional gene silencing has two distinct activity modes
- L5 ANSWER 28 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN
TI Quelling in *Neurospora crassa*
- L5 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN
TI *Neurospora crassa* gene qde-1 protein, its similarity to RNA-dependent RNA polymerase, involvement in post-transcriptional gene silencing induced by transgenes, and its DNA and amino acid sequences
- L5 ANSWER 30 OF 34 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 8
TI An RNA-Dependent RNA Polymerase Gene in *Arabidopsis* Is Required for Posttranscriptional Gene Silencing Mediated by a Transgene but Not by a Virus
- L5 ANSWER 31 OF 34 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 9
TI *Arabidopsis SGS2* and *SGS3* Genes Are Required for Posttranscriptional Gene Silencing and Natural Virus Resistance
- L5 ANSWER 32 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 10
TI Gene silencing: RNA makes RNA makes no protein
- L5 ANSWER 33 OF 34 Elsevier BIOBASE COPYRIGHT 2008 Elsevier Science B.V.
on STN
TI Gene silencing: RNA makes RNA makes no protein
- L5 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 12
TI Gene silencing in *Neurospora crassa* requires

a protein homologous to RNA-dependent RNA polymerase

-> d ibib abs 15 1 6 15 23 29 34

L5 ANSWER 1 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2008:161967 CAPLUS
DOCUMENT NUMBER: 148:348459
TITLE: The RNA-dependent RNA
polymerase essential for post-transcriptional
gene silencing in *Neurospora*
crassa interacts with replication protein A
AUTHOR(S): Nolan, Tony; Cecere, Germano; Mancone, Carmine;
Alonzi, Tonino; Tripodi, Marco; Catalanotto, Caterina;
Cogoni, Carlo
CORPORATE SOURCE: Dipartimento di Biotecnologie Cellulari ed Ematologia,
Università La Sapienza, Rome, Italy
SOURCE: Nucleic Acids Research (2008), 36(2), 532-538
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Post-transcriptional gene silencing (PTGS) pathways play a role in genome defense and have been extensively studied, yet how repetitive elements in the genome are identified is still unclear. It has been suggested that they may produce aberrant transcripts (RNA) that are converted by an RNA-dependent RNA polymerase (RdRP) into double-stranded RNA (dsRNA), the essential intermediate of PTGS. However, how RdRP enzymes recognize aberrant transcripts remains a key question. Here we show that in *Neurospora crassa* the RdRP QDE-1 interacts with Replication Protein A (RPA), part of the DNA replication machinery. We show that both QDE-1 and RPA are nuclear proteins and that QDE-1 is specifically recruited onto the repetitive transgenic loci. We speculate that this localization of QDE-1 could allow the *in situ* production of dsRNA using transgenic nascent transcripts as templates, as in other systems. Supporting a link between the two proteins, we found that the accumulation of short interfering RNAs (siRNAs), the hallmark of silencing, is dependent on an ongoing DNA synthesis. The interaction between QDE-1 and RPA is important since it should guide further studies aimed at understanding the specificity of the RdRP and it provides for the first time a potential link between a PTGS component and the DNA replication machinery.
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 34 IFIPAT COPYRIGHT 2008 IFI on STN
AN 04359999 IFIPAT;IFIUDB;IFICDB
TITLE: Isolation and characterization of a *N. crassa*
silencing gene and uses thereof; *Neurospora*
crassa (*N. crassa*); nucleotide
sequences; vectors and host cells; silencing gene has
a RNA-dependent RNA
polymerase domain; use to study gene
silencing as it pertains to expression of
transgenes
INVENTOR(S): Carlo; Cogoni, Rome, IT
Giuseppe; Macino, Rome, IT
PRIMARY EXAMINER: Università degli Studi di Roma "La Sapienza", IT
Qian, Celian
AGENT: Gauthier & Connors LLP

| NUMBER | PK | DATE |
|--------|----|------|
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| | | | |
|--------------------------|----------------|----------|-----------------|
| PATENT INFORMATION: | US 7001762 | BI | 20060221 |
| | WO 2000050581 | | 20000831 |
| APPLICATION INFORMATION: | US 2000-913878 | | 20000216 |
| | WO 2000-IT48 | | 20000216 |
| | | 20020123 | PCT 371 date |
| | | 20020123 | PCT 102(e) date |

EXPIRATION DATE: 16 Feb 2020

| | NUMBER | DATE |
|------------------------|--|----------|
| PRIORITY APPLN. INFO.: | IT 1999-PM117 | 19990222 |
| FAMILY INFORMATION: | US 7001762 | 20060221 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | Granted Patent - Utility, no Pre-Grant Publication | |
| CHEMICAL | | |
| GRANTED | | |
| ENTRY DATE: | Entered STN: 22 Feb 2006 | |
| | Last Updated on STN: 21 Aug 2006 | |

MICROFILM REEL NO: 012612 FRAME NO: 0048

NUMBER OF CLAIMS: 7

GRAPHICS INFORMATION: 5 Drawing Sheet(s), 5 Figure(s).

DESCRIPTION OF FIGURES:

FIG. 1 shows the restoration of the al-1 expression in 107 insertional mutant strain. The total RNA has been extracted from mycetes collected after light induction over ten minutes from an al-1 silenced strain (6XW), a untransformed wild type strain (WT) and 107 mutant strain. For the hybridization an al-1 specific probe was used. In the lower part the restoration using an al-1 specific probe is showed.

FIG. 2 shows the genomic organization of the qde-1 gene. a) The two cosmides (56G11 and 40H7) able to complement the qde-1 mutants are represented. The white box in the 40H7 cosmid represents the sequences of the cosmid vector. A restriction map of 7,9 Kb qde-1 containing fragment obtained from 40H7 using EcoRI is showed: E(EcoRI), P(PstI), B(BgIII). The black box represents the ORF identified within EcoRI 7,9 Kb fragment. The pDX and pSX plasmids containing the DNA fragments subcloned in the XbaI (X) and EcoRI (E) sites are also showed. B) Southern analysis of the 107 and WT strains. The genomic DNA was digested using BgII and NaeI. In the lower diagram the DNA probe used for the hybridization and the expected BgII/NaeI (B/N) restriction fragments are reported. The triangle represents the integration site in the 107 strain which determines the disappearance of the 1,0 Kb restriction fragment.

FIG. 3 represents the expression of the qde-1 gene in the 107 insertional mutant strain, untransformed wild type (WT) strain and al-1 silenced strain (6XW). The total RNA was hybridized using a qde-1 specific probe. In the lower part the amount of gel loaded RNA is showed.

FIG. 4 represents the amino acid sequence deduced from the qde-1 gene. The underlining indicates the RdRP conserved domain as showed in the alignment of FIG. 5.

FIG. 5 represents a sequence alignment of the QDE-1 protein (SEQ ID No. 2) with other polypeptides from SwissProtein sequence database: ORF from Z488334 (eleql1) C. elegans, ORF from Z98533 (pom) S. pombe, ORF from AF080120 (araB) A. thaliana and RNA-dependent RNA polymerase from Y104403 (RdRP) tomato. Identical residues are pointed out in black, whereas the conservative replacements are showed in gray.

AB A nucleotide sequence encoding for a protein characterized in that it has a silencing activity and comprises a RNA-dependent RNA polymerase domain is disclosed; furthermore expression vectors suitable for the expression of said sequence in bacteria, plants, animals and fungi are disclosed; the invention refers also to organisms transformed by such vectors.

CLMN 7

GI 5 Drawing Sheet(s), 5 Figure(s).

FIG. 1 shows the restoration of the al-1 expression in 107 insertional mutant strain. The total RNA has been extracted from mycetes collected after light induction over ten minutes from an al-1 silenced strain (6XW), a untransformed wild type strain (WT) and 107 mutant strain. For the hybridization an al-1 specific probe was used. In the lower part the restoration using an al-1 specific probe is showed.

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FIG. 3 represents the expression of the qde-1 gene in the 107 insertional mutant strain, untransformed wild type (WT) strain and al-1 silenced strain (6XW). The total RNA was hybridized using a qde-1 specific probe. In the lower part the amount of gel loaded RNA is showed.

FIG. 4 represents the amino acid sequence deduced from the qde-1 gene. The underlining indicates the RdRP conserved domain as showed in the alignment of FIG. 5.

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LS ANSWER 15 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2005:13956 CAPLUS
DOCUMENT NUMBER: 143:224827
TITLE: Gene silencing pathway RNA
-dependent RNA polymerase
of Neurospora crassa; yeast expression and
crystallization of selenomethionated QDE-1 protein
AUTHOR(S): Laurila, Minni R. L.; Salgado, Paula S.; Makeyev,
Eugene V.; Nettleship, Joanne; Stuart, David I.;
Grimes, Jonathan M.; Bamford, Dennis H.
CORPORATE SOURCE: Institute of Biotechnology, Faculty of Biosciences,
Viikki Biocenter, University of Helsinki, Helsinki,
00014, Finland
SOURCE: Journal of Structural Biology (2005), 149(1), 111-115
CODEN: JSBIEM; ISSN: 1047-8477
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The RNA-dependent RNA polymerase, QDE-1, is a component of the RNA silencing pathway in *Neurospora crassa*. The enzymically active carboxy-terminal fragment QDE-1 AN has been expressed in *Saccharomyces cerevisiae* in the presence and absence of selenomethionine (SeMet). The level of SeMet incorporation was estimated by mass spectrometry to be apprx. 98%. Both native and SeMet proteins were crystallized in space group P21 with unit cell parameters $a = 101.2$, $b = 122.5$, $c = 114.4 \text{ \AA}$, $\beta = 108.9^\circ$, and 2 mols. per asym. unit. The native and SeMet crystals diffract to 2.3 and 3.2 \AA , resp.; the latter are suitable for MAD structure determination
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 6
 ACCESSION NUMBER: 2004:343809 CAPLUS
 DOCUMENT NUMBER: 141:36069
 TITLE: The RNA-dependent RNA polymerase, QDE-1, is a rate-limiting factor in post-transcriptional gene silencing in *Neurospora crassa*
 AUTHOR(S): Forrest, Emma C.; Cogoni, Carlo; Macino, Giuseppe
 CORPORATE SOURCE: Sezione di Genetica Molecolare, Dipartimento di Biotecnologie Cellulari ed Ematologia, Istituto Pasteur e Fondazione Cenci Bolognetti, Universita di Roma La Sapienza, Rome, 00161, Italy
 SOURCE: Nucleic Acids Research (2004), 32(7), 2123-2128
 PUBLISHER: Oxford University Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The RNA-dependent RNA polymerase (RdRP) qde-1 is an essential component of post-transcriptional gene silencing (PTGS), termed 'quelling' in the fungus *Neurospora crassa*. Here we show that the overexpression of QDE-1 results in a dramatic increase in the efficiency of quelling, with a concomitant net increase in the quantity of al-1 siRNAs. Moreover, in overexpressed strains there is a significant reduction in the number of transgenes required to induce quelling, and an increase in the phenotypic stability despite progressive loss of tandemly repeated transgenes, which normally dets. reversion of a silenced phenotype to wild type. These data suggest that the activation and maintenance of silencing in *Neurospora* appear to rely both on the cellular amount of QDE-1 and the amount of transgenic copies producing RNA mols. that act as a substrate for the RdRP, implicating QDE-1 as a rate-limiting factor in PTGS.
 REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2000:608891 CAPLUS
 DOCUMENT NUMBER: 133:203848
 TITLE: Neurospora crassa gene qde-1 protein, its similarity to RNA-dependent RNA polymerase, involvement in post-transcriptional gene silencing induced by transgenes, and its DNA and amino acid sequences
 INVENTOR(S): Macino, Giuseppe; Cogoni, Carlo
 PATENT ASSIGNEE(S): Universita' Degli Studi Di Roma "La Sapienza", Italy
 SOURCE: PCT Int. Appl., 48 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|---|----------|-----------------|----------|
| WO 2000050581 | A2 | 20000831 | WO 2000-IT48 | 20000216 |
| WO 2000050581 | A3 | 20001130 | | |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, | | | |

TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CL, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

IT 1306014 B1 20010523 IT 1999-RM117 19990222

CA 2362203 A1 20000831 CA 2000-2362203 20000216

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EP 1155122 A1 20011121 EP 2000-909618 20000216

EP 1155122 B1 20060517

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI, CY

AT 326529 T 20060615 AT 2000-909618 20000216

US 7001762 B1 20060221 US 2002-913878 20020123

PRIORITY APPN. INFO.: IT 1999-RM117 A 19990222
WO 2000-IT48 W 20000216

AB The invention provides a protein encoded by *Neurospora crassa* gene *qde-1* (quelling-deficient 1) that contains a RNA-dependent RNA polymerase domain (residues 710 to 1282) and is involved in post-transcriptional gene silencing induced by transgenes. The invention also provides the DNA sequence of the *N. crassa* gene *qde-1*, as well as amino acid sequence of the gene *qde-1* protein. The invention further provides expression vectors containing a promoter and the *qde-1* gene (in a sense or anti-sense orientation), and organisms (such as prokaryote, plant, fungi or a non-human animal) transformed with said vectors. Still further, the invention provides a plant or non-human animal which contains a mutated *qde-1* gene, which results in reduced or inhibited silencing activity. Finally, the invention relates the use of gene *qde-1* DNA mols.: (1) in modulating gene silencing in plants, animals and fungi, and (2) to potentiate the antiviral-response in a plant.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 12

ACCESSION NUMBER: 1999:347271 CAPLUS

DOCUMENT NUMBER: 131:127496

TITLE: Gene silencing in *Neurospora crassa* requires a protein homologous to RNA-dependent RNA polymerase

AUTHOR(S): Cogoni, Carlo; Macino, Giuseppe

CORPORATE SOURCE: Dipartimento di Biotecnologie Cellulari ed Ematologia, Sezione di Genetica Molecolare, Universita' di Roma La Sapienza, Rome, 00161, Italy

SOURCE: Nature (London) (1999), 399 (6732), 166-169
CODEN: NATUAS; ISSN: 0028-0836

PUBLISHER: Macmillan Magazines

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In plants and fungi, the introduction of transgenes can lead to post-transcriptional gene silencing. This phenomenon, in which expression of the transgene and of endogenous genes containing sequences homologous to the transgene can be blocked, is involved in virus resistance and genome maintenance. Transgene-induced gene silencing has been termed quelling in *Neurospora crassa* and co-suppression in plants. Quelling-defective (*qde*) mutants of *N. crassa*, in which transgene-induced gene silencing is impaired, have been isolated. Here we report the cloning of *qde-1*, the first cellular component of the gene-silencing mechanism to be isolated, which defines a new gene family conserved among different species including plants, animals and fungi. The *qde-1* gene product is similar to an RNA-dependent RNA polymerase found in the tomato. The identification

of qde-1 strongly supports models that implicate an RNA-dependent RNA polymerase in the post-transcriptional gene-silencing mechanism. The presence of qde-1 homologues in a variety of species of plants and fungi indicates that a conserved gene-silencing mechanism may exist, which could have evolved to preserve genome integrity and to protect the genome against naturally occurring transposons and viruses.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 00:51:07 ON 04 NOV 2008)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDHS, BIOTECHNO, CABAB, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 00:51:52 ON 04 NOV 2008
SEA RNA? (3W)DEPENDEN? (3W)RNA? (3W)POLYMERAS?

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1 FILE ADISNEWS
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1 FILE VETB
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1 FILE NAPRALERT
38 FILE NLDB

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FILE 'CAPLUS, USPATFULL, BIOSIS, MEDLINE, SCISEARCH, EMBASE, LIPESCI, ESBIOBASE, CAB, BIOTECHNO, TOXCENTER, PASCAL, USGENE, IFIPAT, AGRICOLA, USPAT2' ENTERED AT 00:54:49 ON 04 NOV 2008

L2 21057 SEA RNA?(3W) DEPENDEN?(3W) RNA?(3W) POLYMERAS?
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L4 77 SEA L3(S) GRASSA?
L5 34 DUP REM L4 (43 DUPLICATES REMOVED)
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FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 30 Oct 2008 (20081030/PD)
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